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# SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE, PUBLISHING THE OFFICIAL NOTICES AND PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

#### FRIDAY, MAY 25, 1906.

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#### STANFORD'S IDEAL DESTINY.1

Foreigners, commenting on our civilization, have with great unanimity remarked the privileged position that institutions of learning occupy in America as receivers of benefactions. Our typical men of wealth, if they do not found a college, will at least single out some college or university on which to lavish legacies or gifts. All the more so, perhaps, if they are not college-bred men themselves. Johns Hopkins University, the University of Chicago, Clark University, are splendid examples of this rule. Steadily, year by year, my own university, Harvard, receives from one to two and a half millions.

There is something almost pathetic in the way in which our successful business men seem to idealize the higher learning and to believe in its efficacy for salvation. Never having shared in its blessings, they do their utmost to make the youth of coming generations more fortunate. there is little originality of thought in their generous foundations. The donors follow the beaten track. Their good will has to be vague, for they lack the inside knowl-What they usually think of is a new college like all the older colleges; or they give new buildings to a university or help to make it larger, without any definite idea as to the improvement of its inner Improvements in the character of our institutions always come from the genius of the various presidents and

<sup>&</sup>lt;sup>1</sup> Address given at Stanford University on Founder's Day.

faculties. The donors furnish means of propulsion, the experts within the pale lay out the course and steer the vessel. You all think of the names of Eliot, Gilman, Hall and Harper as I utter these words—I mention no name nearer home.

This is founder's day here at Stanford -the day set apart each year to quicken and reanimate in all of us the consciousness of the deeper significance of this little university to which we permanently or temporarily belong. I am asked to use my voice to contribute to this effect. can I do so better than by uttering quite simply and directly the impressions that I personally receive? I am one among our innumerable American teachers, reared on the Atlantic coast but admitted for this year to be one of the family at Stanford. I see things not wholly from without, as the casual visitor does, but partly from within. I am probably a typical observer. As my impressions are, so will be the impressions of others. And those impressions, taken together, will probably be the verdict of history on the institution which Leland and Jane Stanford founded.

"Where there is no vision, the people perish." Mr. and Mrs. Stanford evidently had a vision of the most prophetic sort. They saw the opportunity for an absolutely unique creation, they seized upon it with the boldness of great minds; and the passionate energy with which Mrs. Stanford, after her husband's death, drove the original plans through in the face of every dismaying obstacle, forms a chapter in the biography of heroism. Heroic also the loyalty with which in those dark years the president and faculty made the university's cause their cause and shared the uncertainties and privations.

And what is the result to-day? To-day the key-note is triumphantly struck. The first step is made beyond recall. The

character of the material foundation is assured for all time as something unique and unparalleled. It logically calls for an equally unique and unparalleled spiritual superstructure.

Certainly the chief impression which the existing university must make on every visitor is of something unique and unparalleled. Its attributes are almost too familiar to you to bear recapitulation. classic scenery of its site, reminding one of Greece, Greek too in its atmosphere of opalescent fire, as if the hills that close us in were bathed in ether, milk and sunshine; the great city, near enough for convenience, too far ever to become invasive; the climate, so friendly to work that every morning wakes one fresh for new amounts of work; the noble architecture, so generously planned that there is room and to spare for every requirement; the democracy of the life, no one superfluously rich, yet all sharing, so far as their higher needs go, in the common endowment—where could a genius devoted to the search for truth, and unworldly as most geniuses are, find on the earth's whole round a place more advantageous to come and work in? Luft der Freiheit weht! All the traditions are individualistic. Red tape and organization are at their minimum. Interruptions and perturbing distractions hardly exist. Eastern institutions look all dark and huddled and confused in comparison with this purity and serenity. Shall it not be auspicious? Surely the one destiny to which this happy beginning seems to call Stanford is that it should become something intense and original, not necessarily in point of wealth or extent, but in point of spiritual quality. The founders have, as I said, triumphantly struck the key-note, and laid the basis: the quality of what they have already given is unique in character. It rests with the officials of the present and future Stanford, it rests with

the devotion and sympathetic insight of the growing body of graduates, to prolong the vision where the founders' vision terminated, and to insure that all the succeeding steps, like the first steps, shall single out this university more and more as the university of quality peculiarly.

And what makes essential quality in a university? Years ago in New England it was said that a log by the roadside with a student sitting on one end of it, and Mark Hopkins sitting on the other end, was a university. It is the quality of its men that makes the quality of a university. You may have your buildings, you may create your committees and boards and regulations, you may pile up your machinery of discipline and perfect your methods of instruction, you may spend money till no one can approach you; yet you will add nothing but one more trivial specimen to the common herd of American colleges, unless you send into all this organization some breath of life, by inoculating it with a few men, at least, who are real geniuses. And if you once have the geniuses, you can easily dispense with most of the organization. Like a contagious disease, almost, spiritual life passes from man to man by contact. Education in the long run is an affair that works itself out between the individual student and his opportunities. Methods, of which we talk so much, play but a minor part. Offer the opportunities, leave the student to his natural reaction on them, and he will work out his personal destiny, be it a high one or a low one. Above all things. offer the opportunity of higher personal A university provides these contacts. anyhow within the student body, for it attracts the more aspiring of the youth of the country, and they be riend and elevate one another. But we are only beginning in this country, with our extraordinary

American reliance on organization, to see that the alpha and omega in a university is the tone of it, and that this tone is set by human personalities exclusively. world, in fact, is only beginning to see that the wealth of a nation consists more than in anything else in the number of superior men that it harbors. In the practical realm it has always recognized this, and known that no price is too high to pay for a great statesman or great captain of But it is equally so in the reindustry. ligious and moral sphere, in the poetic and artistic sphere and in the philosophic and scientific sphere. Geniuses are ferments: and when they come together as they have done in certain lands at certain times, the whole population seems to share in the higher energy which they awaken. effects are incalculable and often not easy to trace in detail, but they are pervasive and momentous. Who can measure the effects on the national German soul of the splendid series of German poets and German men of learning, most of them academic personages?

From the bare economic point of view the importance of geniuses is only beginning to be appreciated. How can we measure the cash-value to France of a Pasteur, to England of a Kelvin, to Germany of an Ostwald, to us here of a Burbank? main care of every country in the future ought to be to find out who its first-rate thinkers are and to help them. Cost here becomes something entirely irrelevant, the returns are sure to be so incommensurable. This is what wise men the world over are perceiving. And as the universities are already a sort of agency providentially provided for the detection and encouragement of mental superiority, it would seem as if that one among them that followed this line most successfully would quickest rise to a position of paramountcy and distinction.

Why should not Stanford immediately adopt this as her vital policy? Her position is one of unprecedented freedom. Not trammeled by the service of the state as other universities on this coast are trammeled, independent of students' fees and consequently of numbers, Utopian in the material respects I have enumerated, she only needs a boldness like that shown by her founders to become the seat of a glowing intellectual life, sure to be admired and envied the world over. Let her claim her place; let her espouse her destiny. her call great investigators from whatever lands they live in, from England, France, Germany, Japan, as well as from America. She can do this without presumption, for the advantages of this place for steady mental work are so unparalleled. Let these men, following the happy traditions of the place, make the university. The original foundation had something excentric in it; let Stanford not fear to be excentric to the end, if need be. not imitate; let her lead, not follow. Especially let her not be bound by vulgar traditions as to the cheapness or dearness of professorial service. The day is certainly about to dawn when some American university will break all precedents in the matter of instructors' salaries, and will thereby immediately take the lead, and reach the winning post for quality. I like to think  $\mathbf{of}$ Stanford being that university. Geniuses are sensitive plants, in some respects like prima donnas. They have to They don't need to be treated tenderly. live in superfluity; but they need freedom from harassing care; they need books and instruments; they are always overworking, so they need generous vacations; and above all things they need occasionally to travel far and wide in the interests of their souls' development. Where quality is the thing sought after, the thing of supreme quality

is cheap, whatever be the price one has to pay for it.

Considering all the conditions, quality of Stanford has from the first been astonishingly good, both in the faculty and in the student body. Can we not, as we sit here to-day, frame a vision of what it may be a century hence, with the honors of the intervening years all rolled up in its traditions? Not vast, but intense; less a place for teaching youths and maidens than for training scholars; devoted to truth; radiating influence; setting standards; shedding abroad the fruits of learning; mediating between America and Asia, and helping the more intellectual men of both continents to understand each other better.

What a history! and how can Stanford ever fail to enter upon it?

WILLIAM JAMES.

PLANT FORMS EXISTING IN NATURE AND THEIR RELATION TO BOTANICAL RESEARCH.

Any one who is familiar with the various schools of botanical thought and who has talked with many men in the various lines of research, can not but have been impressed by the diversity of opinions about the so-called plant 'species.'

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The systematic botany of America today is, in some respects, in an almost irretrievably chaotic condition, and this condition is unquestionably due to the use of the various manuals which have been published down to the present day. Local workers everywhere determine the names of plants by comparison of six- or eight-line descriptions, and issue floral lists, make botanical surveys, frame ecological deductions, separate 'new species,' work out histological and embryological details, carry out important physiological experiments—everywhere using these manual names to label